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PART IV

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

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SEAMOUNT GROUNDFISH FISHERY OF THE PACIFIC

Preliminary Management Plan

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

SEAMOUNT GROUNDFISH FISHERY OF THE PACIFIC

Preliminary Fishery Management Plan

On the 4th of February, 1977, the Secretary of Commerce, through an appropriate delegation of authority to the Associate Administrator for Marine Resources of the National Oceanic and Atmospheric Administration and the Director of the National Marine Fisheries Service, published a Notice of Determination, Preparation, Issuance, and Implementation of Preliminary Fishery Management Plans at 42 FR 6873. In order that each Plan may have the widest possible circulation, the Secretary has decided that each should be published in the FEDERAL REGISTER.

Dated the 4th day of February, 1977 at Washington, D.C.

WINFRED H. MEIBOHM,
Associate Director,
National Marine Fisheries Service.

PRELIMINARY FISHERY MANAGEMENT PLAN FOR SEAMOUNT GROUNDFISH FISHERY OF THE PACIFIC

DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL MARINE FISHERIES SERVICE FEBRUARY 1977

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1.0 INTRODUCTION

Armorheads occur primarily on the seamounts northwest of Midway Islands in the Hawaiian Archipelago, and most foreign fishing is outside the U.S. Fishery Conservation Zone. There is presently no U.S. harvesting of armorheads or alfonsins. Armorheads make up over 90% of the foreign trawl catches on the seamounts; alfonsins are only a minor constituent. However, the bottom longlining targets on alfonsins.

Because armorheads and alfonsins within the U.S. zone and those in the principal fishing area outside the zone are thought to originate from a common reproductive stock, a biologically sound harvest policy will likely require a cooperative, international approach. The proposed action calls for such a step, and also emphasizes the severe inadequacy of U.S. information concerning the ecology of groundfish stocks and the catch and effort in the foreign groundfish fisheries.

The proposed action temporarily restricts the foreign harvest to a 2,000 MT (metric tons) catch quota, which may be taken by either trawling or bottom longlining. Total effort is limited to 60 vessel-days, beginning on March 1, 1977. Each permitted vessel must make provision to carry a U.S. observer, and the foreign fishing must be done west of the 180° meridian on traditional fishing grounds. Detailed statistics on the permitted fishing operations must be reported by the foreign vessels to U.S. authorities. Further the action requires, as a condition for issuance of future groundfishing permits, that foreign governments (1) share their historical records of fishing data and biological information concerning groundfish with U.S. scientists, and (2) meet with U.S. scientists by December 31, 1977 to consider biological problems of stock assessment and to discuss the desirability of an international research and conservation program.

2.0 PRELIMINARY DESCRIPTION OF THE FISHERY

A. AREAS AND STOCKS INVOLVED

This plan deals with the exploitation by foreign vessels of stocks of pelagic armorheads (*Pentaceros richardsoni*) and alfonsins (*Beryx splendens*) on the seamounts and banks described in Section II.B.1. (The Japanese names for these two species are "kusakari tsubodai" and "kinmedai," respectively.)

Pelagic armorheads, or simply armorheads, are widely distributed in the central and eastern North Pacific. They have been taken in gill nets set in the surface waters off British Columbia (Welander, Johnson, and Hajny 1957) and by trawling at depths of 600 m on guyots and seamounts northwest of Midway (Chikuni 1971). They occur in waters ranging from 5° to 20°C, but seem to prefer temperatures between 8° and 15° C (Chikuni 1970). The range of habitats occupied by armorheads is thus very great.

Stocks of armorheads are also known to occur off New Zealand and South Africa.

The alfonsin (or Japanese alfonsin) is found mainly in the western North Pacific. For many years it has been taken by handlines in Sagami Bay and Kashima Nada in the inshore areas of Japan, and on the banks and slopes around Izu. In 1970 it was reported from Kinansho on the Kinan Seamount Range (or the Kyushu-Palau Seamount Range) (Chikuni 1971). Its water temperature tolerance is quite broad, as with armorheads, but the alfonsin prefers somewhat warmer waters. The distribution of the two species overlaps on the seamounts and banks near the Hawaiian Archipelago.

The life history patterns of armorheads and alfonsins are not well understood, but certain features are known with some confidence. For example, the eggs and larvae of both species are pelagic and are broadly distributed by surface currents. According to Chikuni (1970, 1971) juveniles of both species apparently live in the upper layers of the ocean and at a certain size or age they tend to adopt a more demersal habitat on the tops of seamounts. However, adult armorheads have a very wide vertical distribution, and undergo extensive diurnal movements. During nighttime they are found in compact schools on or near the flat tops of the seamounts and during the day they range from near the seamount tops to the thermocline, having expanded their range by as much as 100 m (Sakiura 1972). Diurnal movements of armorheads are apparently motivated by high concentrations of crustaceans and other food organisms associated with the thermocline.

While the Soviets report that juvenile armorheads occur in considerable numbers on the seamounts, in areas with an abundance of plankton, rarely do the trawls seem to take armorheads less than about 25 cm, or alfonsins less than 19 or 20 cm. However, the mesh size and selectivity of the trawls employed is not known.

Figure 2 shows the seamounts northwest of Midway, with depth contours in fathoms. Most of the fishing for armorheads and alfonsins apparently takes place only on the very small tops of the guyots or "church steeples" rising sharply from the seabed. Some bottom longlining and angling occurs off Midway, Guam, and the Marianas. Most of the seamount tops shown in Figure 2 are deeper than the areas reportedly fished. For example, the 217 fathom (410

m) top on the Hancock Seamount is deeper than tops fished by Japanese trawlers on that seamount. These were at 265–170 m.

The Hancock Seamount top fished by the Soviets in 1968–69 had an area of only 0.35 square miles. Other guyots fished by the Soviets had tops somewhat larger, such as 1.2 square miles, 1.6 square miles, 2.9 square miles, and, on the Milwaukee Banks, 7.5 square miles and 21 square miles.

Figure 2 shows the locations of several guyots and the year of their discovery. Near the Hancock Seamount there are two guyots, with tops at 120 fathoms (222 m) and 150 fathoms (278 m). Among the guyots on the Milwaukee Banks there are two which rise from depths of 1,500–2,500 fathoms almost vertically to within 6 fathoms (11 m) of the sea surface.

B. STATISTICAL HISTORY OF EXPLOITATION

(1) *Soviet Union.* Exploratory fishing for armorheads and alfonsins on the seamounts northwest of Midway was begun by the Soviet Union in November 1967. Commercial production by Soviet trawlers followed almost immediately on banks and seamounts of the Emperor Seamount Range.

During July–November 1968 and March–June 1969 the Soviets surveyed fishing grounds closer to the Hawaiian Islands, including the Kinmei Bank and Milwaukee Banks outside the U.S. 200-mile zone and the Hancock Seamount inside the zone. Altogether, seven areas were explored. Trawling was conducted on the seamount tops, 100 to 400 m below the sea surface, through schools of armorheads averaging 30 m in thickness. Catch per half hour averaged between 3 and 50 tons, on hauls usually lasting only 10 or 20 min. Often as much as 30 tons were taken in the span of 10 min. According to Sakiura (1972), who translated the Russian article describing the surveys, during the 8-month period beginning in December 1969 Soviet trawlers harvested about 133,400 MT (metric tons) of armorheads from these seamounts (this estimate has not been confirmed).

No direct reports of recent Soviet activity are available.

(2) *Japan.* Japanese trawlers began harvesting armorheads and alfonsins on the seamounts northwest of Midway in 1969. In many cases, trawling is conducted by vessels en route to or from the Bering Sea and Gulf of Alaska. At least four fishing companies and three government or semigovernment agencies have fished in the area or have fielded exploratory fishing expeditions. One of the companies reportedly landed 10,000 MT of armorheads in 1970 and another 3,200 MT in 1971.

Japanese activity in 1972 is unknown, but in 1973 two Japanese trawlers operated on the Milwaukee, Colohan, and Hancock Seamounts and harvested an estimated 1,000–1,500 MT in 70 fishing days (they were making two hauls per day, each about 1.5 h). The captain of one of these vessels reported that seven Soviet trawlers were also operating on the seamounts in mid-1973, presumably also exploiting armorheads. The estimated 1975 catch was 19,957 MT, mainly armorhead, of which about 10% was caught in the U.S. 200-mile zone.

In the spring and summer of 1976 three Japanese trawlers were fishing armorheads on the seamounts, averaging 30 MT per day. The Japanese fleet reported in late June that catch rates had dropped sharply since early April when a Soviet fleet appeared on the scene. (Foreign Fishery Information Release No. 76–9, June 15, 1976, completed by Dr. Sunee C. Sonu, NMFS, Terminal Island, CA.)

As with Soviet trawling, the bulk of Japanese armorhead fishing appears to occur outside the U.S. Fishery Conservation Zone. In any case, the amount of armorheads caught by foreign vessels inside the U.S. zone, on the Hancock Seamount, is not known.

The bottom longline fishery off Midway Island took about 4,000 MT in 1975, of which about 500 MT was caught in the U.S. zone. This effort targets on alfonsins. Angling off Guam and the Marianas harvested about 500–600 MT of alfonsins and other groundfish in 1975.

C. SIGNIFICANCE OF HISTORIC DOMESTIC FISHERY

There is no domestic fishery.

D. TYPES AND NUMBERS OF VESSELS, AND KINDS OF GEAR

(1) *Domestic.* None.

(2) *Foreign.* About 5–15 Soviet and Japanese stern trawlers at any one time work the seamounts northwest of Midway. About 16 Japanese vessels engage in bottom longlining off Midway. Another 8 Japanese vessels engage in fishing off Guam and the Marianas. Number of vessels fishing inside the U.S. 200-mile zone is unknown.

E. HISTORICAL IMPACTS OF FOREIGN FISHING ON DOMESTIC FISHERY

None.

F. HISTORY OF REGULATION OF FOREIGN FISHERIES

None.

G. HISTORY OF COOPERATIVE RESEARCH, CONSERVATION, MANAGEMENT, AND DATA EXCHANGE

There has been no joint research, management, or data exchange. However, in 1973 the *No. 61 Taiyo Maru*, a 1,500 ton stern trawler, twice arrived in Honolulu to refuel. On each occasion the captain and others aboard the vessel briefed NMFS personnel on the seamount trawling operations and presented them with samples of the catch of armorheads and alfonsins.

3.0 STATUS OF THE FISHERY STOCKS

A. DISTRIBUTION OF STOCKS (SEE SECTION II.C.1a)

B. ABUNDANCE OF EXPLOITED STOCKS

(1) *Equilibrium yield curves.* None available.

(2) *Yield per recruit analyses.* None available. Apparently growth rates for armorheads have been determined by Japanese and Soviet scientists.

(3) No cohort analyses are available.

(4) *Stock-recruitment relationships.* The relationships between density of the spawning stock and subsequent recruitment is not known for either species. It is quite likely that the "stocks" of armorheads and alfonsins on individual seamounts and guyots, such as the Hancock Seamount or the Milwaukee Banks, originate from a common pool of larvae, the spawning stock being composed of adults from all the seamounts. If this is so, then provided recruitment is related to spawning stock, the recruitment to a particular seamount will be affected by fishing intensity on all the seamounts.

C. CURRENT FISHING STATUS

Only very sketchy catch data are available. These indicate that the total annual harvest of armorheads and alfonsins (the armorheads make up over 80% of the catch) by Japanese and Soviet vessels from the *entire* seamount chain is probably between 10,000 and 50,000 MT. However, the Soviets reportedly took 133,400 MT in an 8-month period in 1969–70. This figure has not been confirmed.

Very limited data are available on harvest levels from specific areas within or outside the U.S. Fishery Conservation Zone. Further, there is virtually no information on the level of effort applied toward the harvest of armorhead and alfonsins over past years. It also is indicated that the biological parameters of the stocks are undefined. As a result, it is impossible to derive any estimate of maximum sustainable yield using conventional methods.

Presumably the Soviet Union and Japan have historical records of their catches and fishing effort on the seamounts, and these may permit some rough assessments of MSY for groundfish in the entire seamount area. If the Hancock Bank stock is not independent of other groundfish stocks, but is only a small fraction of a larger stock having a common parentage, then a consideration of this broader picture would be necessary to understand the status of groundfish fishing on the Hancock Bank as well as other area.

4.0 OPTIMALITY

A. BIOLOGICAL CONSIDERATIONS

As the previous section emphasized, virtually nothing is known to U.S. scientists about the population dynamics of the armorheads and alfonsins occurring on the seamounts. Historical catch statistics, upon which estimates of potential yield might be based, are not available and critical questions concerning stock identity have not been answered.

Ideally, we would develop an optimal harvest policy based on our best estimate of MSY and on socio-economic considerations. However, estimates of MSY cannot be derived on the basis of available data. As has been indicated, virtually nothing is known about life history patterns, population dynamics, natural and

fishing mortality, recruitment, or catch and effort relationships.

Since the groundfish stock in the U.S. Fishery Conservation Zone is probably ecologically interdependent with stocks far outside the zone, and affected by fishing effort outside the zone, a holistic international management effort may be required.

Until stock abundance and the effects of fishing can be determined a prudent policy would be to limit the annual harvest from the Hancock Bank area to a relatively small amount and to require that foreign applicants submit historical catch and effort statistics and cooperate with U.S. scientists so that stock assessments can be made.

B. ECONOMIC CONSIDERATIONS

The armorheads and alfonsins are not presently exploited by U.S. fishermen and are not sold in U.S. markets. However, the Japanese value the armorheads highly as a table fish. Exvessel prices in June 1976 were about $600 per ton, about the same as the price for skipjack tuna. (Foreign Fishery Information Release No. 76–10, July 2, 1976, compiled by Dr. Sunee C. Sonu, NMFS, Terminal Island, CA.)

The potential value of the armorhead resource may be quite high. If a 10,000 MT annual harvest could be sustained in the Hancock Seamount area, and the above exvessel price applied, an annual catch worth $6 million could be taken by U.S. fishermen. (This catch figure is speculative; we have no data to support it.)

Expected operating costs for U.S. fishers contemplating the harvest of armorheads should be relatively easy to estimate under different vessel-gear configurations. Thus first-cut feasibility assessments should not be difficult. (For Japanese trawlers a 40 MT catch per fishing day is required to break even.) (Foreign Fishery Information Release No. 76–9, June 15, 1976, compiled by Dr. Sunee C. Sonu, NMFS, Terminal Island, CA.)

From an economic standpoint, U.S. interests should not be damaged by the foreign harvest of groundfish as long as

(1) the average annual foreign harvest does not exceed the MSY, or

(2) groundfish stock density is not reduced to a point where U.S. vessels cannot profitably enter the fishery, or

(3) the groundfish fishery does not significantly reduce the abundance of other valuable resources, such as precious corals.

All of these are important considerations. However, we suffer from a lack of data and cannot now evaluate the impact of different fishing policies with respect to these issues in a reliable quantitative manner. There are too many unknowns. For example, we do not yet know the distribution of precious corals in the Northwestern Hawaiian Islands, nor the potential value of this resource; we do not know the distribution of armorheads east of 180°; we do not know stock densities and the potential value of the armorhead resource to U.S. fishers.

C. OPTIMUM YIELD (PRELIMINARY DETERMINATION)

Lacking calculated estimates of MSY on the basis of catch and effort data and biological parameters, it is assumed that the known foreign harvest of groundfish in the areas covered by this DEIS/PMP is equal to or greater than MSY. That is, MSY in the Hancock Seamount area is estimated to be about 2,000 MT/year; in the area near Midway Island, 500 MT/year; and in the waters off Guam and the Marianas, 500 MT/year.

D. ESTIMATED DOMESTIC PRODUCTION POTENTIAL

There is presently no domestic fishery for armorheads or alfonsins, and no immediate prospects for one, but it is possible that some experimental fishing will soon be done by U.S. fishers. Until then the U.S. potential is considered to be zero.

E. TOTAL ALLOWABLE LEVEL OF FOREIGN FISHING

Section 201(g) of the Fishery Conservation and Management Act of 1976 states that "To the extent practicable, each such [Preliminary Management Plan] (1) shall contain a preliminary description of the fishery and a preliminary determination as to the optimum yield from such fishery and the total allowable level of foreign fishing with respect to such fishery * * *" Ideally, this provision suggests a four step process by which the total allowable level of foreign fishing will be derived:

(1) Estimation of MSY;

(2) Calculation of OY, based on MSY as modified by relevant economic, social, or ecological factors;

(3) Assess the capacity and the extent to which U.S. fishing vessels will harvest the OY;

(4) Derive the total allowable level of foreign fishing.

There is a lack of historic catch and effort data and biological information. Therefore, the optimum policy is to restrict fishing effort to an isolated area and to low levels until more data and information are available.

This Preliminary Management Plan proposes, therefore, that a foreign harvest be permitted in 1977 in the Hancock Seamount area and associated guyots west of the 180° meridian. Foreign nations, as a condition for obtaining future permits to harvest pelagic armorhead and alfonsin in this area be required to submit detailed information on previous years' harvest and effort levels as well as results of their studies and research projects on armorhead and alfonsins. The level of harvest allowed would be 2,000 metric tons in aggregate of all species, which will provide meaningful data but probably will not affect armorhead and alfonsin stocks adversely. Only trawl and bottom longlining be allowed. Not more than 50 vessel-days of trawling and not more than 50 vessel-days of longlining will be permitted. This fishing would be exploratory in nature. Total allowable level of foreign fishing elsewhere is zero.

It is expected that the data submitted in compliance with this plan will be used by the Western Pacific Fishery Management Council and/or the National Marine Fisheries Service to derive estimates of MSY or OY, to develop comprehensive fishery management plans, and to identify the total allowable level of foreign fishing in the future.

5.0 CONSERVATION AND MANAGEMENT MEASURES APPLICABLE TO FOREIGN TRAWL FISHERIES

A. EFFORT RESTRICTION

Not more than 50 vessel-days of trawling and not more than 50 days of bottom longlining will be permitted. Foreign fishing shall be restricted to the U.S. fishery conservation zone in the area of the Hancock Seamount and associated guyots west of 180° and north of 28°N. latitude. U.S. observers must be allowed aboard any foreign vessel for a period of time determined by the U.S. Department of Commerce.

B. DATA TO BE REPORTED BY FOREIGN TRAWL VESSELS

(1) Catch of each species, including incidental species, should be measured and reported in hundreds of kilograms (i.e., to the nearest one-tenth of a metric ton). The catch should be reported separately for each haul made, including hauls with zero catch. Catch data should include incidental take of precious corals.

(2) The number of hauls daily should be reported. For each haul both the total hauling time and the time during which the gear is over the seamount top should be reported, to the nearest 5 min.

(3) The time at the beginning of the haul, and the total duration of the haul should be reported for each haul. The location at the midpoint of each haul to the nearest tenth of a minute of latitude and longitude should be reported for each haul.

(4) Other data to be reported: (a) The average depth of the seamount top over which fishing was conducted should be reported for each haul, even if fishing was not done on or near the bottom;

(b) The average fishing depth of the footrope should be reported for each haul;

(c) The length of the footrope and average distance between headrope and footrope during fishing should be reported for each haul;

(d) The cod end mesh size should be reported for each haul;

(e) Detailed specifications of all the fishing gears used should be submitted [if the gear and its fishing characteristics are relatively constant, submission of complete gear specifications may be sufficient and requirements (c) and (d) may be waived];

(f) Average speed of vessel (towing speed) during each haul, to nearest 0.5 knot.

(g) Weight in kilograms of precious corals taken incidental to groundfish, by species (pink, gold, bamboo, other).

C. DATA TO BE REPORTED BY BOTTOM LONGLINE VESSELS

(1) Bi-weekly catch of each species to be measured and reported in hundreds of kilograms (i.e., to the nearest one-tenth of a metric ton) by species.

(2) Effort should be measured and reported in number of hooks fished and average soak time.

(3) Midday location of fishing, to the nearest tenth of one degree of longitude and latitude, by vessel, daily.

(4) The average fishing depth of the longline gear, used in each location.

D. OTHER DATA AS REQUIRED BY U.S. SCIENTISTS FOR STOCK ASSESSMENT AND EVALUATION OF FISHING

None.

E. TIME REQUIREMENTS FOR REPORTING

Annual reports and bi-weekly reports shall be submitted as set forth in Section 8.0 of the Appendix.

F. CHECK-IN, CHECK-OUT

All foreign vessels should be required to check in with U.S. authorities when moving into the zone to fish under permit and to check out when leaving the area. A schedule for fishing should be worked out at least 2 months in advance of the first check-in, in coordination with the Department of Commerce.

Foreign governments should pay for transportation and other costs incurred in placing U.S. observers on board, maintaining them while on board, and returning them to their home port.

G. ZONES AND/OR PERIODS OF LIMITED FOREIGN FISHING

Foreign fishing for armorheads and alfonsins should be restricted to the historical fishing sites on the Hancock Seamount and associated guyots west of the 180° meridian and north of the 28° N latitude. No time restriction is presently necessary.

H. CATCH LIMITATIONS

A combined catch of no more than 2,000 MT of armorheads, alfonsins, and incidental species may be taken in the permitted vessel-days of fishing.

I. OTHER LIMITATIONS

(1) *Area.* Fishing should be restricted to the area west of long. 180° and north of 28° N latitude.

(2) *Gear.* Only trawling and bottom longline gear should be used.

(3) *Incidental catches.* Under no circumstances should the trawls take species protected under the Endangered Species Act or the Marine Mammal Protection Act. Precious corals may be taken incidentally to trawling.

J. COASTAL STATE FISHERY CONSERVATION AND MANAGEMENT MEASURES RECOMMENDED FOR INCORPORATION INTO THIS PLAN

None.

K. OTHER MEASURES

The foreign applicant is required to submit to the U.S. Department of Commerce a complete historical record of trawling, bottom longlining,, and any other effort and catches on the Hancock Seamount and other groundfish habitats, including those outside the U.S. Fishery Conservation Zone. This data should encompass the catches of all species of fish and other organisms taken, and should include available information on species and size composition, age and growth, sexual maturity, feeding habits, and other biological parameters. Further, the foreign applicant should agree to meet with U.S. scientists before December 31, 1977, in the United States, at a time and place determined by the Department of Commerce, to review the historical record of catch statistics in the groundfish fishery, to discuss biological aspects of groundfish management, and to determine a course of action for cooperative groundfish research and conservation.

L. RELATIONSHIP OF CONSERVATION AND MANAGEMENT MEASURES TO CONSERVATION NEEDS

The recommended policy on foreign harvest of armorheads and alfonsins will permit fishing to continue on the Hancock Seamount on a limited basis until such time as the stocks and their potential annual output can be assessed. The recommended action also will provide some of the data by which such assessments can be made.

The recommended management measures are designed to provide for the gathering of information on groundfish stock density and population biology and to set the stage for a cooperative international determination of conservation requirements.

M. RELATIONSHIP OF CONSERVATION AND MANAGEMENT MEASURES TO NATIONAL STANDARDS

The recommended management measures for the foreign fisheries on armorheads and alfonsins are consistent with the national standards in P.L. 94-265 (Title III, Sect. 301).

N. APPROXIMATE COSTS OF CONSERVATIVE AND MANAGEMENT MEASURES—TO BE DETERMINED

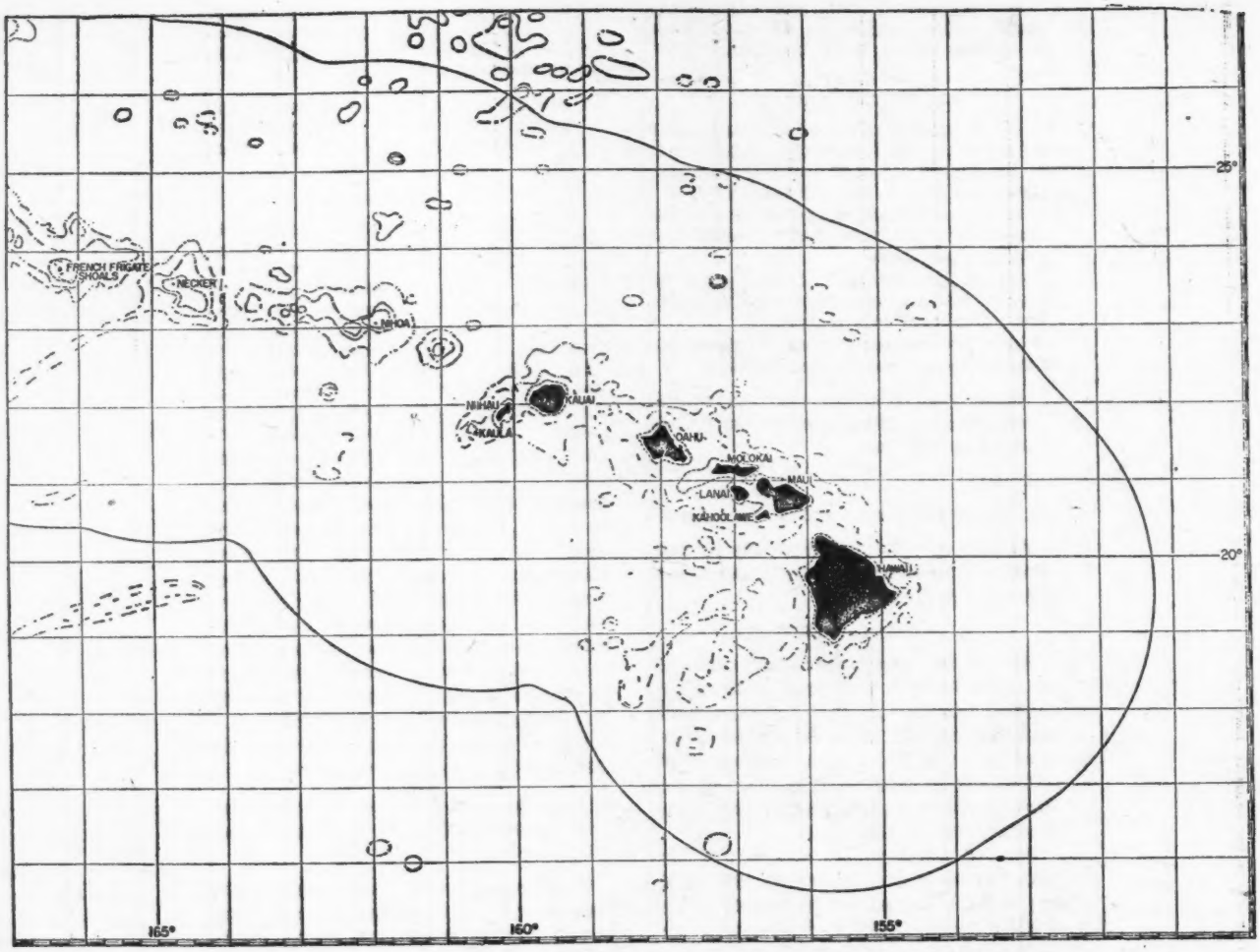


Figure 1.--The unofficial 200-mile zone around the Hawaiian Archipelago.

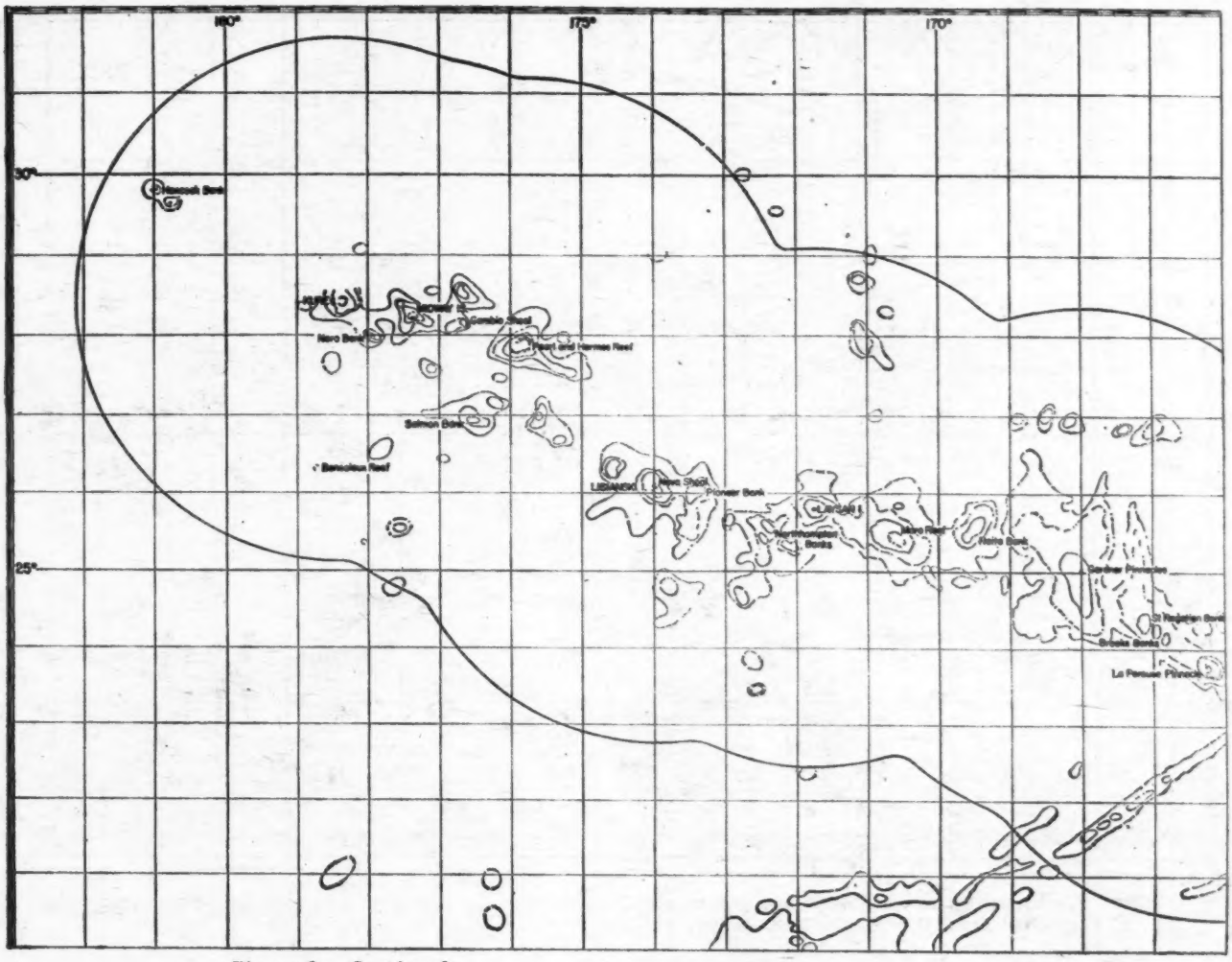


Figure 1.--Continued.

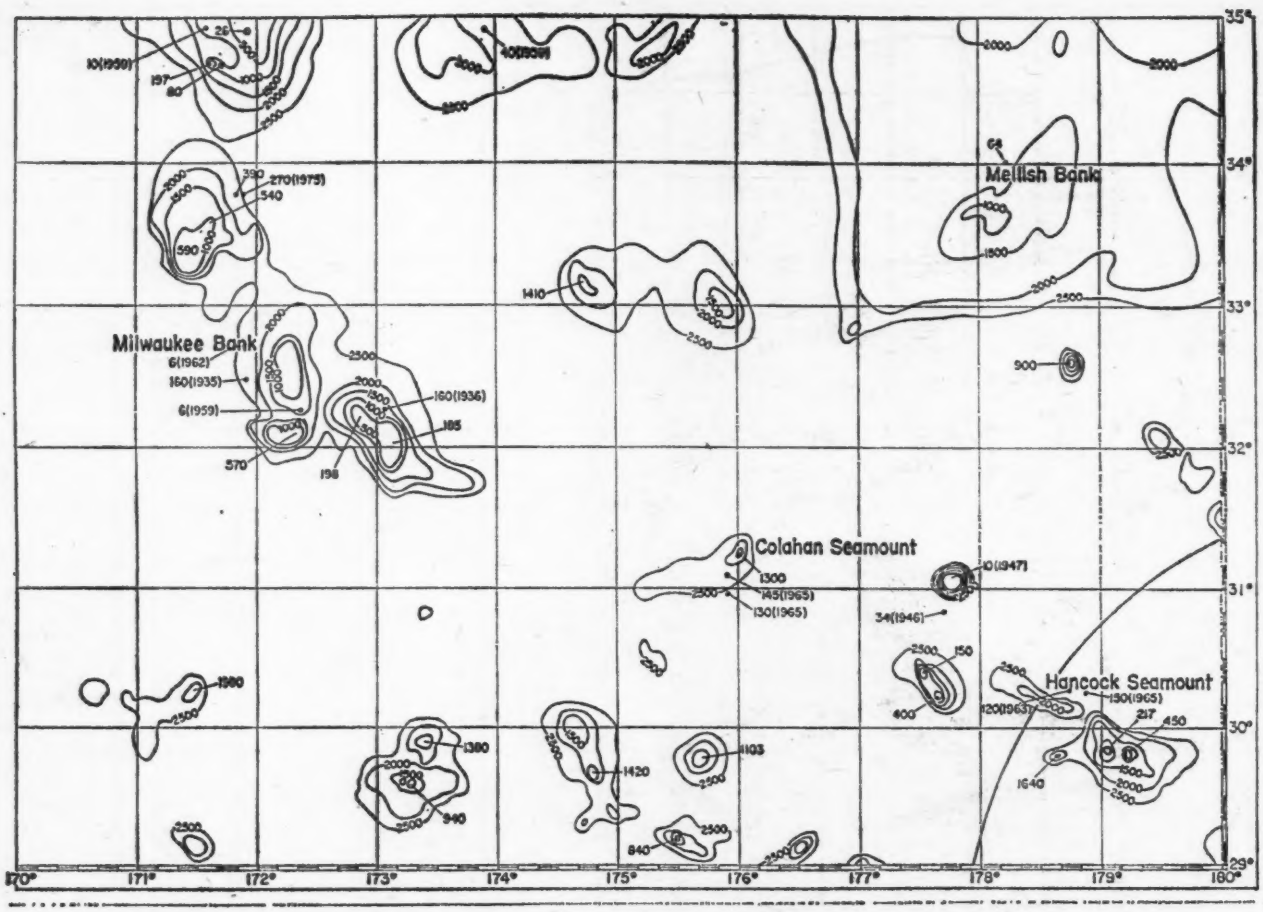
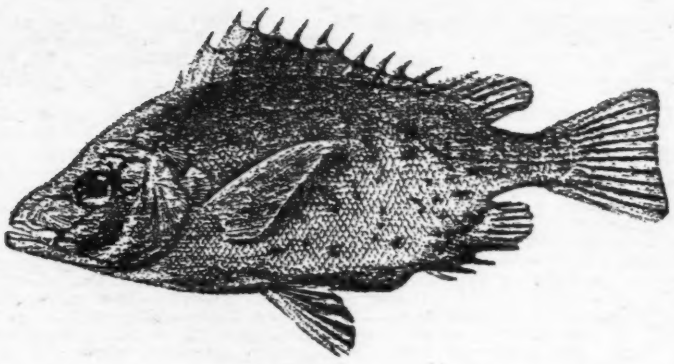
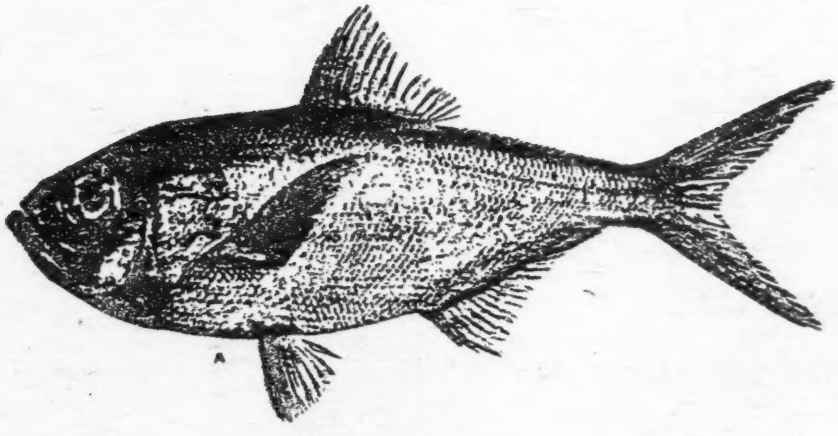


Figure 2.—Locations of seamounts and guyots northwest of the Northwestern Hawaiian Islands. Year of discovery is indicated for each guyot, and the 200-mile line is shown. Depths in fathoms.



Pelagic armorhead (Pentaceros richardsoni)



Alfonsin (Beryx splendens)

Figure 3.--Illustrations of adult armorhead and alfonsin.

6.0 REFERENCES TO RELEVANT BACKGROUND DOCUMENTS

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7.0 APPENDIX—CONDITIONS AND RESTRICTIONS

PART V—EASTERN, CENTRAL, AND WESTERN PACIFIC

Subpart A—General Provisions

1.0 *Purpose.* The purpose of these Conditions and Restrictions is to implement Pub. L. 94–265 in respect to selected fisheries in the Eastern, Central, and Western Pacific.

2.0 *Definitions.* (a) Western Pacific. That area of the Pacific Ocean west of the 180° meridian.

(b) Central and Eastern Pacific. That area of the Pacific Ocean east of the 180° meridian.

(c) Regional Director. The National Marine Fisheries Service Regional Director of the Southwest Region, 300 South Ferry Street, Terminal Island, California 90731.

Subpart D

1.0 *Definitions.* (a) The terms used in this Subpart will have the meaning ascribed to them in this chapter unless otherwise defined herein.

(b) Regulations in this Subpart will apply to fishing for: Pelagic armorheads (*Pentaceros richardsoni*) and Alfonsins (*Beryx splendens*).

2.0 *Catch and Vessel Day Quotas.* (a) The annual vessel day limit by foreign registered vessels fishing for pelagic armorheads and alfonsins within the Fishery Conservation Zone in the Western Pacific shall not exceed 50 vessel-days each of trawling and bottom longlinging.

(b) The annual catch quota by foreign registered vessels fishing for pelagic armorheads and alfonsins within the Fishery Conservation Zone in the Western Pacific shall not exceed 2,000 mt (metric tons) of either species or an aggregate of the combined species.

3.0 *Closed Areas.* (a.) It shall be unlawful for foreign registered vessels to fish for pelagic armorheads and alfonsins in the Fishery Conservation Zone in the Central and Eastern Pacific east of the 180° meridian and south 28° N latitude.

4.0 *Gear Restrictions.* (a.) No gear other than trawl and bottom longlining gear shall be used.

5.0 *Open Season.* (a.) The open season for pelagic armorhead and alfonsin fishing by foreign registered fishing vessels fishing in the Fishery Conservation Zone in the Western Pacific shall begin at 0001 hours March 1, 1977 and terminate at a time and date to be determined and announced in the FEDERAL REGISTER at least 10 days in advance of closure. Concurrent with the publication of the FEDERAL REGISTER Notice, the National Marine Fisheries Service will notify the appropriate agent(s) of owners or operators holding foreign permits of the intended closure time and date.

6.0 *Closed Season.* (a.) The Regional Director shall announce the closure of the Season by publication of a Notice in the FEDERAL REGISTER, specifying the time and date for the termination of pelagic armorhead and alfonsin fishing in the Fishery Conservation Zone in the Western Pacific. The closure is determined in the following manner:

(1) The National Marine Fisheries Service shall maintain records of vessel days and catch for foreign registered vessels fishing for pelagic armorheads and alfonsins in the Fishery Conservation Zone seaward of Guam, Hawaii, and American Samoa. When the accumulated and estimated vessel days or the accumulated and estimated catch equals 100% of the allowable vessel days or allowable catch, permitted under Section 2.0, the Regional Director shall publish the Notice in the FEDERAL REGISTER required in paragraph (b) of this Section.

7.0 *Observers.* (a.) All foreign registered vessels fishing for pelagic armorheads and alfonsins in the Fishery Conservation Zone in the Western Pacific shall be required upon notification by the Regional Director to carry a U.S. observer, and shall provide the shipboard facilities necessary for the U.S. observer to engage in daily radio communication with the U.S. Coast Guard or other U.S. authorities.

8.0 *Records and Recordkeeping.* (a.) The master of every foreign registered vessel fishing for pelagic armorheads and alfonsins in the Fishery Conservation Zone in the Western Pacific shall maintain an accurate log book of fishing operations while in the U.S. Fishery Conservation Zone. The log book shall contain data for each haul as follows:

(1) Catch, by individual species, to the nearest one-tenth (0.1) MT.

(2) The time at the beginning of the haul and the total duration of the haul to the nearest five (5) minutes.

(3) The location at the midpoint of each haul to the nearest one-tenth (0.1) minute of latitude and longitude.

(4) The average depth of the Seabottom to the nearest fathom.

(5) The average fishing depth of the footrope to the nearest fathom.

(6) The average fishing speed of the vessel (towing speed) to the nearest one-half (0.5) knot.

(7) The date.

(8) The vessel permit number.

(9) The cod end mesh size to the nearest millimeter.

(10) The length of the footrope to the nearest one-tenth (0.1) meter and average distance between footrope and headrope to the nearest one-tenth (0.1) meter.

(11) Amount, species, and size composition of precious corals taken incidental to groundfish by trawling.

The log book shall contain the following data pertaining to daily bottom longlining operations:

(1) Midday location of fishing, to the nearest tenth of one degree latitude and longitude;

(2) Number of hooks set and average soak time;

(3) Number of fish caught by species for: (a) Pelagic armorhead, (b) alfonsin, (c) other.

(4) Average depth of hooks set.

(b.) The records described in 8.0(a) above shall be furnished to the U.S. observer at such time as the observer requests the records.

(c.) Each nation whose fishermen fish in the area set forth in part 3.0 above shall report by February 28 of the following year, annual catch and effort statistics, as follows:

Catch in metric tons by gear type by month by area to the nearest one-half degree (.5°) latitude by one-half degree (.5°) longitude, by the following species groupings: Pelagic armorhead, alfonsins, and other groundfish.

Catch in kilograms of precious corals taken incidental to fishing operations by month by area to the nearest one-tenth degree (.1°) latitude and longitude square, by the following species groupings: Pink coral, gold coral, bamboo coral, and other corals.

Effort in hours trawled by month by area to the nearest one-half degree (.5°) latitude and longitude square; and effort in average number of hooks soaked per 24-hour period by month by area to the nearest one-half degree (.5°) latitude and longitude square. The annual report shall be submitted to the Regional Director.

(d) In addition to the annual report, a summary report shall be prepared by the master of every foreign vessel for every fourteen (14) day period spent fishing in the area set forth in 3.0 above. The summary report shall contain the following data: Catch, in metric tons, of pelagic armorhead, alfonsins, other groundfish, by gear type; Incidental catch in kilograms of pink coral, gold coral, bamboo coral, and other corals; and Effort in hours trawled and/or average number of hooks soaked per 24-hour period. The summary report shall be furnished to the NMFS observer on board, or if no observer is on board the vessel, to the Regional Director via United States Coast Guard communications stations as prescribed in Section 611.4(b) of these regulations. The summary report shall be submitted not more than ten (10) days after the end of the previous fourteen (14) day period or, if the vessel is on the grounds less than (14) days, within ten (10) days of leaving the grounds.

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